SCCSID = gen_model_def_param.man v1.1 02/15/03

Documentation by: Cary White
Hydrologic Systems Modeling Division

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SOUTH FLORIDA WATER MANAGEMENT MODEL V5.0
INPUT FILE DOCUMENTATION

"gen_model_def_param.dat"

THIS DATA FILE PROVIDES THE SFWMM MODEL WITH THE REQUIRED DEFINITION PARAMETER DATA
FOR ANY GIVEN SIMULATION AND INCLUDES THE FOLLOWING:
A) SIMULATION STARTING & ENDING YEARS AND MONTHS
B) MODEL DOMAIN SIZE (NUMBER OF ROWS & TOTAL NUMBER OF CELLS FOR SFWMM & NSM)
C) GRID SPACING (MILES IN NORTH-SOUTH AND EAST-WEST ORIENTATION)
D) TIME STEP INTERVALS (MODEL TIME STEP AND OVERLAND FLOW TIME STEPS)
E) MODE OF OPERATION (CALIBRATION OR SIMULATION)
F) TYPE OF SIMULATION (CURRENT OPERATIONS OR FUTURE OPERATIONS)
G) LP FLAGS FOR VARIOUS PRINTING & OUTPUT OPTIONS

THIS FILE IS ASSIGNED TO UNIT NUMBER 112 IN THE ALTWMM FILE
AND IS READ UNIT 112 IN SUBROUTINE GEN_MODEL_RUN_DEF_PARAM.F

5 10 5 20 5 30 5 40 5 50 5 60 5 70 5 80 5 90 5 100 5 110

COLS.	VAR.NAME	FORMAT	DESCRIPTION
1. SIMULATION START AND END DATES			
	RECORD 1: FORMAT(4I5)		
1	ifyr	I5	Beginning Year of Simulation
2	ibm	I5	Beginning Month of Simulation
3	iENDyr	I5	Ending Year of Simulation
4	ilastm	I5	Ending Month of Simulation
2. MODEL DOMAIN SIZE			
	RECORD 1: FORMAT(3I5)		
1	maxy	I5	Maximum number of rows in SFWMM model domain

2	maxy_nsm	I5	Maximum number of rows in NSM model domain
3	max_cells	I5	Maximum number of cells in SFWMM domain

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3. MODEL GRID SPACING

RECORD 1: FORMAT(2F5.0)

1	xspc	F5.0	EAST-WEST GRID SPACING IN MILES
2	yspc	F5.0	NORTH-SOUTH GRID SPACING IN MILES

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4. MODEL TIME STEP

RECORD 1:FORMAT(F5.1)

1	DT	F5.1	NUMBER OF TIME STEPS IN DAYS

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5. OVERLAND FLOW TIME STEP

RECORD 1:FORMAT(I4)

1	ntstep_ov	I4	NUMBER OF DAILY TIME STEPS FOR OVERLAND FLOW

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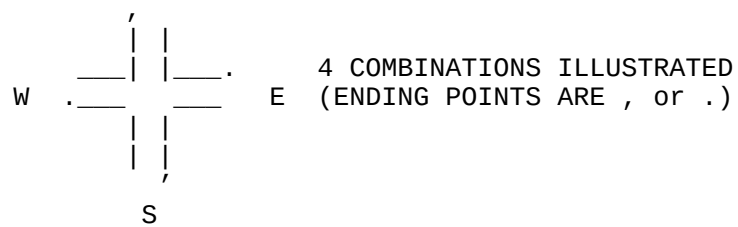
6. NUMBER OF COMBINATIONS COMPUTING OVERLAND FLOW

RECORD 1:FORMAT(I4)

1	max_nca_ov	I4	NUMBER OF COMBINATIONS USED TO NUMERICALLY COMPUTE OVERLAND FLOW IN MODEL DOMAIN (1-4; 4 RECOMMENDED) ** N-->S & W-->E || E-->W & N-->S || S-->N & E-->W || W-->E & S-->N



** Indicates the path in which overland is calculated (e.g. N-->S & W-->E is overland flow from N to S & then W to E)

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7. SIMULATION MODE

RECORD 1:FORMAT(A5)

1	runmode	A5	MODE OF SIMULATION: CALIB;calibration run or SIMUL;simulation run

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8. SIMULATION TYPE

RECORD 1:FORMAT(A7)

1	typerun	A7	SIMULATION TYPE: PRESENT; current operations or variants thereof FUTURE; future Base case or proposed operations with requiring projected land use, demands, flow targets, and/or boundary flows

COLS.	VAR.NAME	FORMAT	DESCRIPTION

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9. LP FLAGS; REINITIALIZATION OPTION ; REINITIALIZATION MONTH; REINITIALIZATION FREQUENCY

RECORD 1:FORMAT(9I4)

1	npopts	I4	NUMBER OF LP FLAGS INPUT (primarily for printing)
2	initialize_annually_opt	I4	OPTION TO RE−INITIALIZE LOK STAGES & WATER LEVELS DURING SIMULATION [0 = NO ; 1 = YES]
3	ibm_initc	I4	MONTH OF RE−INITIALIZATION [1 − 12]
4	ifreq_init	I4	FREQUENCY OF RE−INITIALIZATION [1 = every year ; 2 = every 2 years ; ETC.]
5−9	NOT USED	I4	NOT USED CURRENTLY

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10. STARTING TIME FOR RAINFALL & ET−RECHARGE

RECORD 1:FORMAT(2I5,I3)

1	isyr	I5	STARTING YEAR FOR RAINFALL
2	isyretbin	I5	STARTING YEAR FOR ET−RECHARGE DATA
3	ism	I3	STARTING MONTH FOR ALL TIME DEPENDENT DATA

11. OPTIONS TO ESTIMATE AGRICULTURAL/URBAN DEMANDS & RF DRIVEN OPS

RECORD 1:FORMAT(*)

1	use_lec_et	*	LEC ET MODULE SWITCH
2	use_trigger	*	TRIGGER MODULE SWITCH
3	wca_import_variation	*	IDENTIFICATION OF STAGE TARGET VARIATIONS IN WCAs OR ELSEWHERE (OPTIONS BELOW): CONST [stage targets are fixed (time independent)] DAILY [stage targets are input daily]

12. MODEL GRID DOMAIN BOUNDARIES FOR SFWMM & NSM

RECORDS 1-5:FORMAT(14I3)

1-14	minx (minx(i),i=1,maxy)	14I3	MINIMUM COLUMN NUMBER IN MODEL DOMAIN FOR ROWS 1 TO MAXY

RECORDS 1-5:FORMAT(14I3)

1-14	maxx (maxx(i),i=1,maxy)	14I3	MAXIMUM COLUMN NUMBER IN MODEL DOMAIN FOR ROWS 1 TO MAXY

RECORDS 1-5:FORMAT(14I3)

1-14	minx_nsm (minx_nsm(i),i=1,maxy_nsm)	14I3	MINIMUM COLUMN NUMBER IN NSM MODEL DOMAIN FOR ROWS 1 TO MAXY_NSM

RECORDS 1-5:FORMAT(14I3)

1-14	minx_nsm (maxx_nsm(i),i=1,maxy_nsm)	14I3	MAXIMUM COLUMN NUMBER IN NSM MODEL DOMAIN FOR ROWS 1 TO MAXY_NSM

RECORDS 1-5:FORMAT(14I3)

1-14	MXOV (MXOV(I),I=1,MAXY)	14I3	MAXIMUM COLUMN IN MODEL DOMAIN FOR WHICH OVERLAND FLOW IS COMPUTED FOR ROWS 1 TO MAXY

13. LP FLAGS FOR PRINTING OUTPUT

RECORDS 1-15:FORMAT(I2)

COL	FLAG_NUMBER	FORMAT	DESCRIPTION

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FOLOWING DATA ARE IP/LP FLAGS (1 = TRUE,0 = FALSE) used to control
model input/output options (single dependency):
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1      ip(1)       i2           read a restart file (reads restart_output,unit 55)
1      ip(2)       i2           print stage, ponding and canal stage for the last day of simulation to be
1      ip(3)       i2           print end-of-month stage,ponding,max monthly stages to ascii file
                                (creates mthly_key_output.dat)
1      ip(4)       i2           print inundation frequencies to ascii file (creates mthly_key_output.dat)
1      ip(5)       i2           print static input data (creates echo_grid_statdta.dat)
1      ip(6)       i2           print yearly canal budget summaries (creates ann_canal_bud.dat)
1      ip(7)       i2           print monthly canal budget summaries (creates mthly_canal_bud.dat)
1      ip(8)       i2           print daily canal stages (creates daily_canal_stg.dat)
1      ip(9)       i2           print daily levee seepage values (creates daily_levee_spg.dat)
1      ip(10)      i2           print daily LOK ET (creates daily_lok_et.dat)
1      ip(11)      i2           print mean number of days per year volume limit for overland flow is reached
                                (creates ann_excess_ovlf_vol_lim.dat)
1      ip(12)      i2           print passive weir flow in Everglades (creates daily_weirflow.dat)
1      ip(13)      i2           Not currently used (place holder for future changes)
1      ip(14)      i2           Not currently used (place holder for future changes)
1      ip(15)      i2           Not currently used (place holder for future changes)
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FOLOWING DATA ARE IP/LP FLAGS (1 = TRUE,0 = FALSE) used to control
model input/output options (inter dependency):

        RECORDS 16-25:FORMAT(i2)
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1      ip(16)      i2           ip(16): print end-of-month stages
1      ip(17)      i2           ip(17): print end-of-month ponding
1      ip(18)      i2           ip(18): print monthly total evapotranspiration
1      ip(19)      i2           ip(19): print daily information instead of end_of_month (including some binary files).
                                        Information used
1      ip(20)      i2           ip(20): print monthly volumes of surface and groundwater that flows to neighboring nodes
                                        to the east and to the south
1      ip(21)      i2           ip(21): output daily total et (daily_total_et.bin)
1      ip(22)      i2           ip(22): print monthly output to binary files
1      ip(23)      i2           ip(23): print daily summary of water supply deliveries at major structures
                                        (daily_ws_str_capac_flw.dat)
1      ip(24)      i2           ip(24): output overland flow (runoff) to canal on a monthly basis for all grid cells to
                                        binary file ovlflw_to_cnl.bin
1      ip(25)      i2           ip(25): print daily information instead of end_of_month (including some binary files).
                                         Information used

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END OF DESCRIPTION FOR INPUT FILE "gen_model_def_param.dat" (cwhite, lcadavid 2/5/2003)
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